

REMARKS

The last Office Action of December 23, 2011 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-56 are pending in the application. Claims 1-28, 32, 35, and 37-56 are withdrawn from consideration. Claims 29-31, 33, 34 and 36 have been cancelled. Claims 57-63 have been added. A total of 16 claims is now on file. No claim surcharge is due.

Claim 36 was rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 29 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 5,589,910 to Malmström ("Malmström") taken together with either U.S. Pat. No. 5,842,600 Singletery ("Singletery") or U.S. Pat. No. 6,712,342 to Bosko ("Bosko").

Claims 31 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. Malmström taken together with either Singletery or Bosko and further in view of U.S. Pat. Publication No. 2003/0168754 to Spiegel ("Spiegel").

Claims 33, 34 and 36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Malmström taken together with either Singletery or Bosko and further in view of U.S. Pat. No. 5,958,307 to Kazuma ("Kazuma").

REJECTION OF CLAIM 36 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Since claim 36 has been cancelled, the rejection thereof is now moot.

REJECTION OF CLAIMS 29 AND 30 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER MALMSTRÖM TAKEN TOGETHER WITH EITHER SINGLETERRY OR BOSKO.

The rejection under 35 U.S.C. 103(A) is respectfully traversed.

In order to clearly distinguish the present invention from the cited art, applicant has cancelled claims 29 and 30 and presented new claims 57-63 directed to the apparatus for mixing gas and liquid.

New claim 57 is directed to a apparatus maintained under pressure for producing finely-bubbled carbonation of the liquid/gas mixture by additionally leading the liquid/gas mixture through a granulate filled gasifier.

Malmström teaches that the gas is guided into a container filled with liquid. The container is however not filled entirely so the supplied gas can expand once inside the container. The container can be refilled with gas in order to have the gas dissolve in the fluid/gas mixture. The mixture is being led into the secondary carbonator identified as a cooler. That container is also not entirely filled such that the gas is not under pressure. The reference does not teach a maintained pressure level within the "first" and "second" gasifiers.

The Examiner has acknowledged that Malmström does not teach an in-line carbonator; especially one that is filled with a granulate in which the fluid/gas mixture is being thoroughly carbonated which results in a greater number of bubbles. Malmström can only produce a gas/liquid with less bubbles.

The Examiner has cited Singleterry or Bosko for teaching carbonation apparatus having upstream and downstream carbonation devices.

Singleterry teaches guiding water through a venture nozzle and while moving through the nozzle the water is mixed with gas to form a water gas mixture. As shown in Fig. 3 of Singleterry mixer 40 contains a mixture with large volume gas bubbles.

The so produced liquid/gas mixture does not compare with the fine-bubbled mixture that can be realized with the liquid passing over the granulate under pressure and as soon as the Singeltery liquid has been tapped will loose its carbonation and become flat.

A combination of Malmström and Bosko will likewise not lead to the now claimed apparatus. Bosko, while stating that is directed to liquids of different grades of carbonation, a gas/fluid mixture is either directly led to the taps or is enriched further with CO₂. An apparatus of this type does not produce finely-bubbled liquid. The Bosko device lacks a continuous gas liquid stream which flows under a beginning pressure and downstream is being tapped while the pressure in the sytem is maintained. The Bosko device does not have an even pressure throughout the system and it is possible to tap uncarbonated water also. Bosko also does not show a system in which the liquid/gas mixture is pressed through a gasifier containing granulate.

Withdrawal of the rejection of claims 29 and 30 under 35 U.S.C. §103(a) is thus respectfully requested.

REJECTION OF CLAIM 31 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER MALMSTRÖM TAKEN TOGETHER WITH EITHER SINGLETERRY OR BOSKO AND FURTHER IN VIEW OF SPIEGEL.

The Spiegel reference the Examiner cites does not teach that a finely-bubbled liquid/gas mixture is produced which contains an increased amount of bubbles. As such, the apparatus produces a mixture which greatly foams when tapped and loses its carbonation very quickly. So tapping has to be conducted slowly so no overflow due to foaming occurred. To alleviate this problem, still water had to be added at high volume tapping times, which eroded the quality of the carbonated drinks.

The currently claimed apparatus allows large tapping capacity without foaming. Withdrawal of the rejection of claim 31 under 35 U.S.C. §103(a) is thus respectfully requested.

REJECTION OF CLAIMS 33, 34 AND 36 UNDER 35 U.S.C. §103(A) AS BEING UNPATENTABLE OVER MALMSTRÖM TAKEN TOGETHER WITH EITHER SINGLETERRY OR BOSKO AND FURTHER IN VIEW OF KAZUMA.

Kazuma does not disclose the apparatus as presently claimed in claim 57. While Kazuma was cited for showing a shock carbonator, that element is currently not part of any claim and thus Kazuma in connection with any of the other reference combination does not render the claimed invention obvious.

Withdrawal of the rejection of claim 33, 34 and 36 under 35 U.S.C. §103(a) is thus respectfully requested.

CITED REFERENCES

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the newly submitted claims. It is thus felt that no specific discussion thereof is necessary.

CONCLUSION

Applicant believes that when the Examiner reconsiders the claims in the light of the above comments, he will agree that the invention is in no way properly met or anticipated or even suggested by any of the references however they are considered.

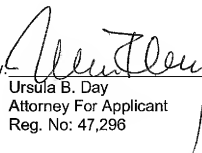
None of the references discloses a device for mixing a gas/mixture in the presence of the claimed gasifiers and filled with granulate.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

By: 
Ursula B. Day
Attorney For Applicant
Reg. No: 47,296

Date: June 23, 2011
708 Third Avenue
Suite 1501
New York, N.Y. 10017
(212)244-5500
UBD:pn